Kentucky's Five-Step Program

Step 1: Forming a Planning Team

These teams, composed of representatives of the community, local government, business and industries, are responsible for developing local wellhead protection plans, implementing management strategies and assessing the future needs of the community or public water system (PWS). Each planning team is represented by a local planning team leader who acts as the contact person between the community or PWS and the state. A planning team might include:

- Public organizations such as community organizations, environmental groups, public interest groups, League of Women Voters, retired and senior volunteers.
- Regulatory organizations such as elected officials, local government agencies and public works director.
- Government/public service organizations such as fire departments, public water supplier, local cooperative extension agent and county Natural Resources Conservation Service.
- Private organizations such as business, industry, land developers and farmers.
- Citizens of the community.

Step 2: Delineating the Wellhead or Spring Protection Area

Determining appropriate Wellhead Protection Areas (WHPA) requires the collection of geologic and hydrogeologic data. Because of the technical nature of WHPA delineations, public water systems (PWSs) may need to contract private geologic and engineering firms to perform the necessary work.

The Groundwater Section provides technical assistance to nontransient/noncommunity and smaller community PWSs when requested. The local planning team can contact the Groundwater Section for assistance. The Kentucky Rural Water Association also provides on-site technical assistance to its members.

Step 3: Contaminant Source Inventory

Once WHPAs have been delineated, an inventory of potential contaminant sources must be completed for each area. The purpose of this inventory is to locate past, present and proposed activities that may pose a threat to the groundwater. A potential contaminant source may be any activity or substance which, under certain circumstances, may pose a contamination threat to groundwater. Once the potential contaminant sources have been compiled, they are ranked according to their risk to the water supply.

Management strategies should be developed (see Step 4) in accordance with the contaminant source inventory and the risks posed to the groundwater by contaminant sources.

Conducting a Contaminant Source Inventory

- Prepare maps for recording inventory.
- Gather existing data.
- Conduct field surveys for closing data gaps.
- Rank potential contaminants.
- Prepare final contaminant source map.

Step 4: Managing Contaminant Sources

Implementation of reasonable and effective management plans within wellhead protection areas is a critical goal of wellhead protection requiring cooperation among federal, state and local governments and the public water systems.

Signage on transportation routes indicating entry into a Source Water Protection Area can be used as a management tool. The signs provide an emergency telephone number for reporting a spill. Spills on Kentucky transportation routes can be reported by dialing 911 or 1-800-928-2380.

The local planning team should adopt management strategies appropriate to the specific needs of the community, bearing in mind the contaminant source inventory prepared in Step 3. Public education and involvement are essential in developing and implementing an effective management plan.

Regulatory Strategies	Nonregulatory Strategies
Zoning	Public Education
Ordinances	Land Transfer and Voluntary Restrictions
Environmental Regulations	Signage

Step 5: Planning for the Future

Contingency planning is a vital aspect of a wellhead protection program. Even with careful planning, unforeseen contamination incidents can occur due to leaks, spills, accidental releases, illegal discharges and other activities in and around the wellhead protection area. A contingency plan helps ensure that the community is prepared to respond to emergency situations and can provide an alternate water supply if necessary.

For communities that rely on groundwater as a water source, wellhead protection should be a vital part of community planning. Development plans should be weighed against the risks to groundwater associated with future land use.